CIMON
Total Solution for Industrial Automation

www.cimon.com

green-3L Series

NU1R

User Manual

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS : (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

⚠ Caution

To use this product correctly, it is absolutely required to read the product descriptions before use.

1. For your safety and the safe operation of this product, please read this manual before using the product. The manual is subject to change without notice.
2. Please review the product specification in this manual to determine the suitability of this product for its intended use.
3. For your safety only qualified persons should perform electrical and wiring attachments to this product.

FCC RF
INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

MEMO

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Essential Safety Precautions

⚠ WARNING

Installation

- Please do not disassemble or modify the PC. It will void the Warranty and may cause a high voltage electric shock.
- This version of the PC is not rated for flammable environments. Do not use this panel around flammable gases.

Wiring

- To prevent an electric shock, confirm that the power supply is turned-off before making any connection to the PC.
- Do not use power beyond the specified voltage range of the PC.
- Doing so may cause a fire or an electric shock.

Maintenance

- The PC uses a lithium battery to back up the internal clock. Do not replace this battery yourself because it may cause an explosion. If the battery needs to be replaced, please contact your local service center.

Essential Safety Precautions

⚠ CAUTIONS

Installation

- Be sure to securely connect all cable connectors to the PC. A loose connection may cause incorrect input or output.

Wiring

- Field Ground (FG) wires must be run individually from each unit to the master grounding terminal. DO NOT daisy chain the FG wires between devices.
- Correctly wire the panel, be sure that the rated voltage and terminal layout are within the designated range. If the voltage supplied differs from the rated voltage, or incorrect wiring or grounding is performed, it may cause a fire or unit malfunction and it will void the warranty.
- Use only the designated torque to tighten terminal block screws of the panel. If these screws are not tightened firmly, it may cause a short circuit, fire or panel malfunction.
- Be careful that metal filings and wiring debris do not fall into the PC, they can cause a fire, panel malfunction or incorrect operation.

Unit Disposal

- When this unit is disposed of, it should be done so according to your country's regulation for similar types of industrial waste.

General Safety Precautions

- Do not strike the touch panel with a hard or pointed object, or press on the touch panel with too much force, since it may damage the touch panel or the display.
- Do not install the PC where the ambient temperature can exceed the allowed range. Doing so may cause the PC to malfunction or shorten its operation life.
- Do not restrict or limit naturally occurring rear-face ventilation of the PC, or storing or using the PC in an environment that is too hot.
- Do not use the PC in areas where large, sudden temperature changes can occur. These changes can cause condensation to form inside the unit, possibly causing the unit to malfunction.
- Do not allow water, liquids, metal or charged particles to enter inside the PC, since they can cause either a PC malfunction or an electrical shock.
- Do not store or use the PC in direct sunlight, or in excessively dusty or dirty environments.
- Do not store or use the PC where strong jolting or excessive vibration can occur.
- Do not store or use the PC where chemicals (such as organic solvents, etc.) and acids can evaporate, or where chemicals and acids are present in the air.
- Do not use paint thinner or organic solvents to clean the PC.
- After turning the PC OFF, be sure to wait a few seconds before turning it ON again. If the PC started too soon, it may not start up correctly.

Package Contents

The following items are contained in the package of the PC Series. Before using the PC Series, please confirm that all items listed here are present.

▪ PC

▪ Power Cable

▪ Bracket set

▪ User manual

This unit has been carefully packed, with special attention to quality. However, should you find anything damaged or missing, please contact your local Cimon distributor immediately.

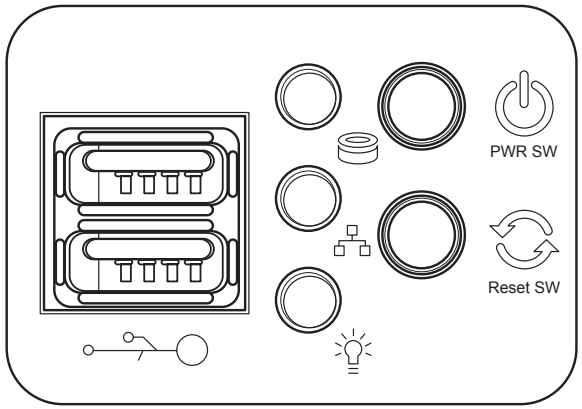
1. Dimensions

**482mm(19") X 250mm(9.84") X 1U(44mm)*

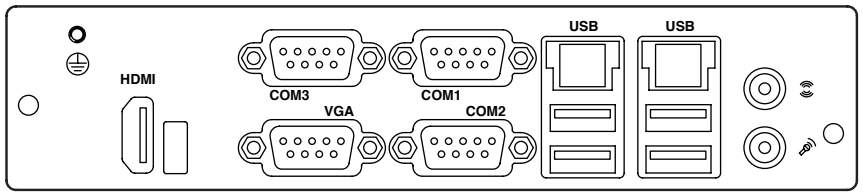
(Unit : mm)

2. Interfaces

▪ Front

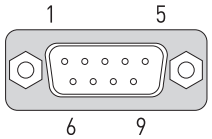


▪ Rear



▪ COM1 / COM2 / COM3 : RS-232C

This interface is used to connect the PC to the host via an RS-232 cable.

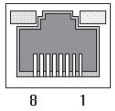
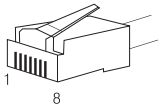


Connector	Pin No.	Name	Description
	1	DCD	Data Carrier Detect
	2	RD	Receive Data
	3	TD	Transmit Data
	4	DTR	Data Terminal Ready
	5	SG	Signal Ground
	6	DSR	Data Set Ready
	7	RTS	Request To Send
	8	CTS	Clear To Send
	9	RI	Ring Indicator

- The serial port(RS-232C) of the PC is not isolated.
- Inside the Xpanel, the SG (Signal Ground) and FG (Frame Ground) terminals are connected to each other.

▪ Ethernet

This interface complies with the IEEE802.3 for Ethernet (10Base-T/100Base-TX/1000Base-T).

RJ45 Connector	RJ45 Jack
	

3. Wiring and Power Supply Caution

⚠WARNING

- To avoid an electric shock, when connecting the PC power cord terminals to the power terminal block, confirm that the PC power supply is completely turned OFF, via a breaker, or similar unit.
- Since there is no power switch on the PC unit, be sure to attach a breaker-type switch to its power cord.
- If the power supply voltage exceeds the GP's specified range, connect a voltage transformer.
- Between the line and the ground, be sure to use a low noise power supply. If there is still an excessive amount of noise, connect a noise reducing transformer.
- The power supply cord should not be bundled with or kept close to main circuit lines (high voltage, high current), or input/output signal lines.
- Connect a surge absorber to handle power surges.
- To reduce noise, make the power cord as short as possible.

4. Grounding Caution

- When grounding to the rear face FG terminal of the PC, (on the Power Input Terminal Block), be sure to create an exclusive ground.
- Inside the PC unit, the SG (Signal Ground) and FG (Frame Ground) terminals are connected to each other.
- When connecting an external device to the PC with the SG terminal, ensure that no short-circuit loop is created when you setup the system.

5. Specification

	CM-NU1R
CPU	Intel Baytrail-I Embedded Processor E3845 Quad Core 1.91GHz (Fanless)
MEMORY	DDR3 SDRAM 4GB (max, 8GB)
STORAGE	mSATA SSD 128 GByte
GRAPHIC	Integrated Intel HD Graphic
EX. STORAGE	SATA X 1
SERIAL (COM1)	RS232C
SERIAL (COM2)	RS232C
SERIAL (COM3)	RS232C
ETHERNET	Gigabit Ethernet, RJ-45 / 2 Port
USB	Front : USB 2.0 / 2 Port
	Rear : USB 2.0 / 4 Port
SOUND	Line Out / 1 Port, Mic In / 1 Port
EX. VIDEO	RGB, HDMI
*OS (Selectable)	Windows Embedded Standard 7P Windows Embedded Standard 8.1 Industry Pro Windows 7 Professional (DSP)
UTILITY PROGRAM	EWF / Winclon (Recovery System)
NORMAL POWER CONSUMPTION	TBD
MAX POWER INPUT	AC 100 ~ 240V (40W)

6. Environmental Specifications

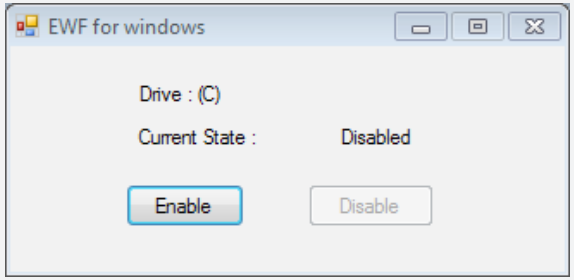
Item	Specification
Normal Power consumption	13.1W
Ambient temperature	0℃~ 50℃
Storage temperature	-20℃~ 60℃
Ambient humidity	10%RH~85%RH(below 29℃, No dew condensation)
Storage humidity	10%RH~85%RH(below 39℃, No dew condensation)
Environment condition	800hPa~1114hPa(2000m or less)
Dust	0.1mg/m^3 or less
Pollution degree	Pollution degree 2
Corrosion gas	None
Vibration resistance	SSD storage type 9.8m/S^2, 10Hz~25Hz in X,Y,Z (80min)
Noise resistance	Impulse, EFT/Burse, Surge, ±2KV, 1uS
Static discharge resistance	4kV(IEC61000-4-2 LEVEL 3)

EWF: Enhanced Write Filter

Model	NP series, NU series
Applied OS	Windows Embedded Standard 7P
	Windows Embedded 8.1 Industry Pro

The C: Drive of TOUCH/PPC series are protected by EWF. It is part of Windows Embedded which stores volume changes on another medium instead of applying them to the original volume.

- When you change the settings of Windows, install program or write files in C: drive, those will be stored in RAM temporarily.
- When TOUCH/PPC series are rebooted, all data in the C: drive will be removed and restored to previous status.
- In order to enable and disable EWF, click “Start” and run XWFWin as administrator.



- If you click [Enable], PC will reboot and EWF will be enabled.
- If you click [Disable], PC will reboot and EWF will be disabled.
- In case of Windows Embedded 7, EWF will be disabled without reboot.

Product Warranty

January 2014

All Cimon products including hardware, software, and firmware *(collectively called “Products”)* carry a **one-year warranty** against defects in materials and workmanship beginning from the date of product receipt from seller or its appointed distributor. If a product proves defective in materials and workmanship within one year from the date of purchase, we will replace or repair it. **Products returned under warranty after 30 days may be replaced with refurbished or remanufactured goods at Cimon’s discretion.** Cimon makes no representation or warranty, express or implied, that the operation of the Products will be uninterrupted or error free, or that the functions contained therein will meet or satisfy buyer’s intended use or requirements. **Repaired or replaced Products provided as a result of this warranty are warranted for a period of six (6) months from the shipment to buyer or the remainder of the original warranty term for that particular product, whichever is longer.** Cimon’s standard policy is that all customers are responsible for freight charges to Cimon when returning products under the warranty return policy.

This warranty will be void if Products date codes or serial numbers are removed or defaced. Warranties do not apply to products that have been subjected to abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized repair, misuse, neglect, accident, alteration, improper installation or other acts which are not the fault of Cimon, including damage caused in shipping. Our warranty also does not apply to any product that has been damaged by external causes such as fire, flood, sand, dirt, lightning, acts of God, battery leakage, theft, blown fuses, improper use of any electrical source or connection to product not recommended in writing for interconnection by Cimon.

In no event will Cimon be liable, whether in contract, tort or under any other legal theory, for lost profits or revenues, loss of use or similar economic loss, for any indirect, special, incidental, consequential, punitive or similar damages arising out of or in connection with any products including non-conforming products, or for any third party claims against you relating to the products, even if we have been advised of the possibility of such claim. **In no event will our monetary liability in respect of any product exceed the purchase price that you paid for it.**

To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to are and usually change with time. It is your responsibility to determine which codes should be followed, and to verify that the equipment, installation and operation is in compliance with the latest revision of these codes.

Product Warranty

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THE STATUTE OF LIMITATIONS FOR FILING A CLAIM SHALL BE LIMITED TO THE SHORTER OF TWELVE MONTHS, OR THE SHORTEST PERIOD ALLOWED UNDER APPLICABLE LAW.

Product Warranty

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